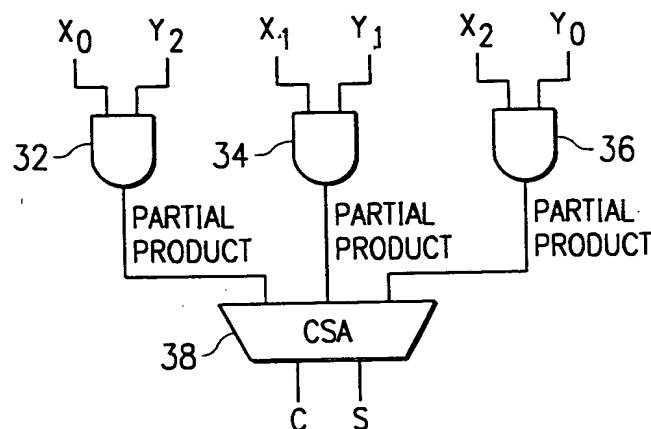
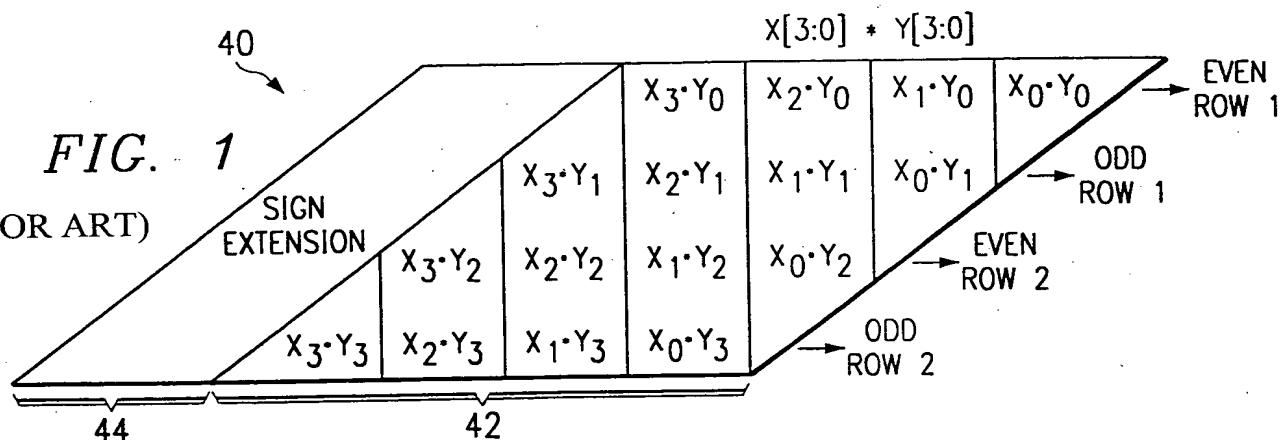
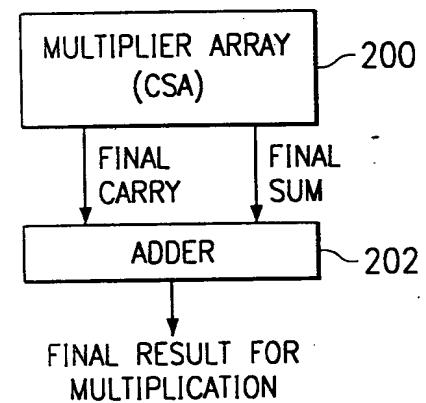


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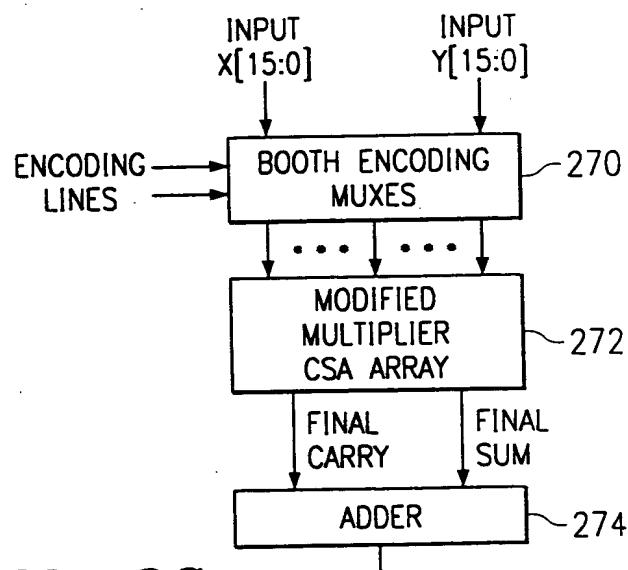
*FIG. 1*  
(PRIOR ART)



*FIG. 2A*  
(PRIOR ART)



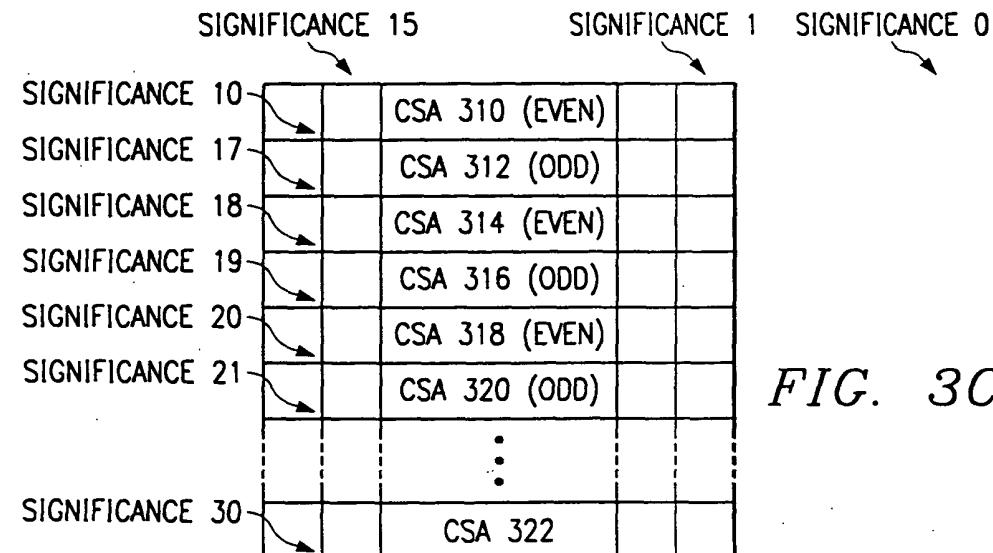
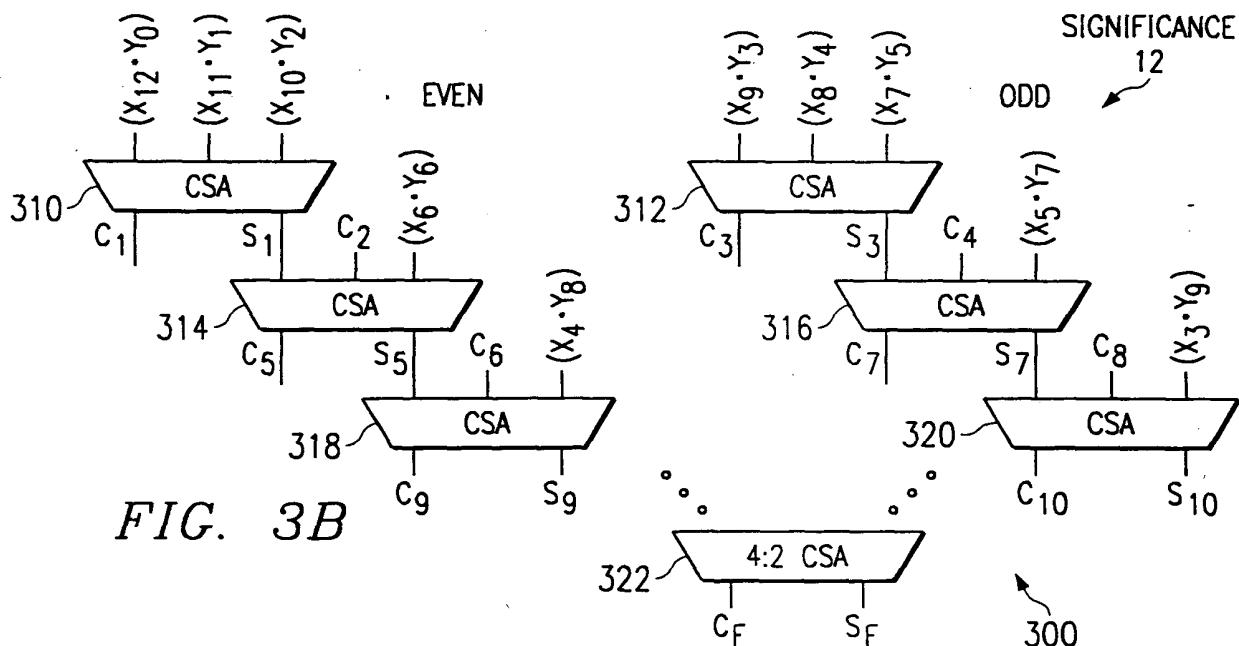
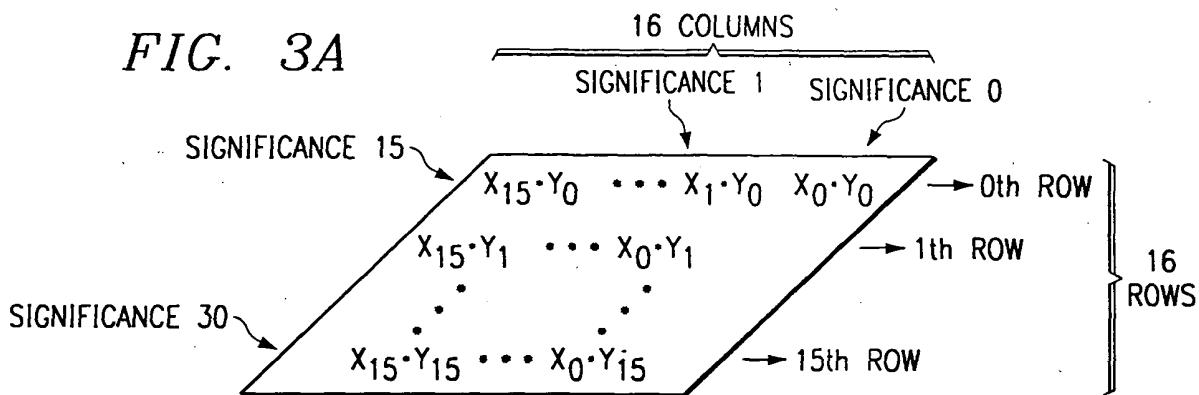
*FIG. 2B*  
(PRIOR ART)



*FIG. 2C*  
(PRIOR ART)

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*FIG. 3A*



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$$\begin{aligned}
 A &= S_A * (-1) * 2^{N-1} + \sum_{i=0}^{N-2} a_i * 2^i = S_A * (-1) * 2^{N-1} + A' \\
 B &= S_B * (-1) * 2^{N-1} + \sum_{i=0}^{N-2} b_i * 2^i = S_B * (-1) * 2^{N-1} + B' \\
 \text{PRODUCT} &= A * B = (S_A * (-1) * 2^{N-1} + A') * (S_B * (-1) * 2^{N-1} + B') \\
 &= \underbrace{S_A * S_B * 2^{2N-2}}_{\text{CORNER CELL}} + \underbrace{S_A * (-1) * 2^{N-1} * B'}_{\text{A SIGN} * \text{B'}} + \underbrace{S_B * (-1) * 2^{N-1} * A'}_{\text{B SIGN} * \text{A'}} + \underbrace{A' * B'}_{\text{ARRAY CORE}}
 \end{aligned}$$

FIG. 4

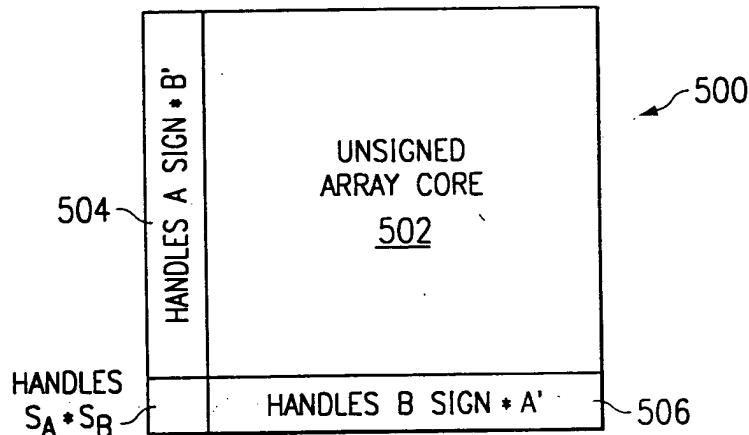


FIG. 5

CORNER BIT	$S_A$	$S_B$
0	0	0
1	0	1
1	1	0
1	1	1

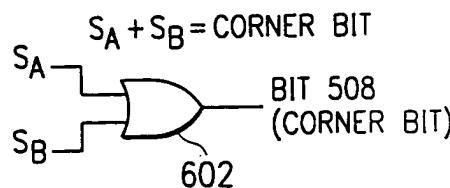


FIG. 6

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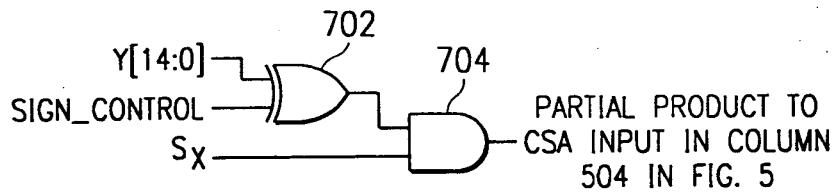


FIG. 7A

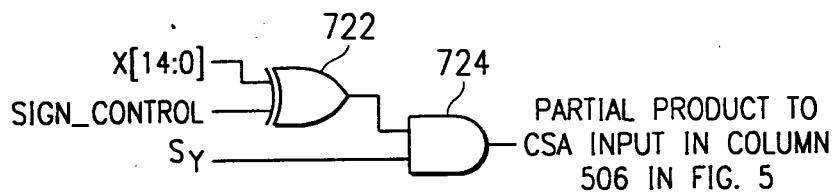


FIG. 7B

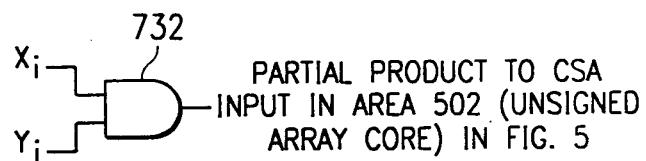


FIG. 7C

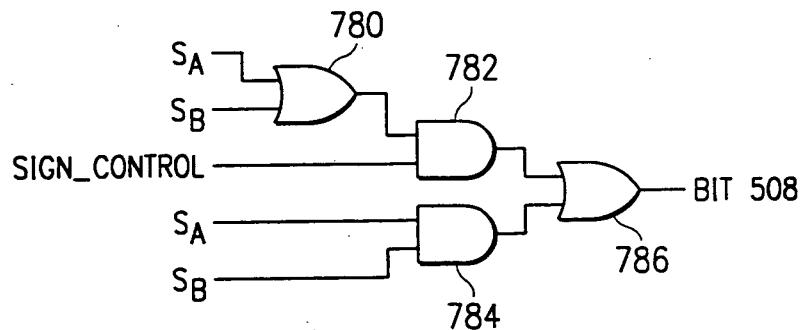


FIG. 7D

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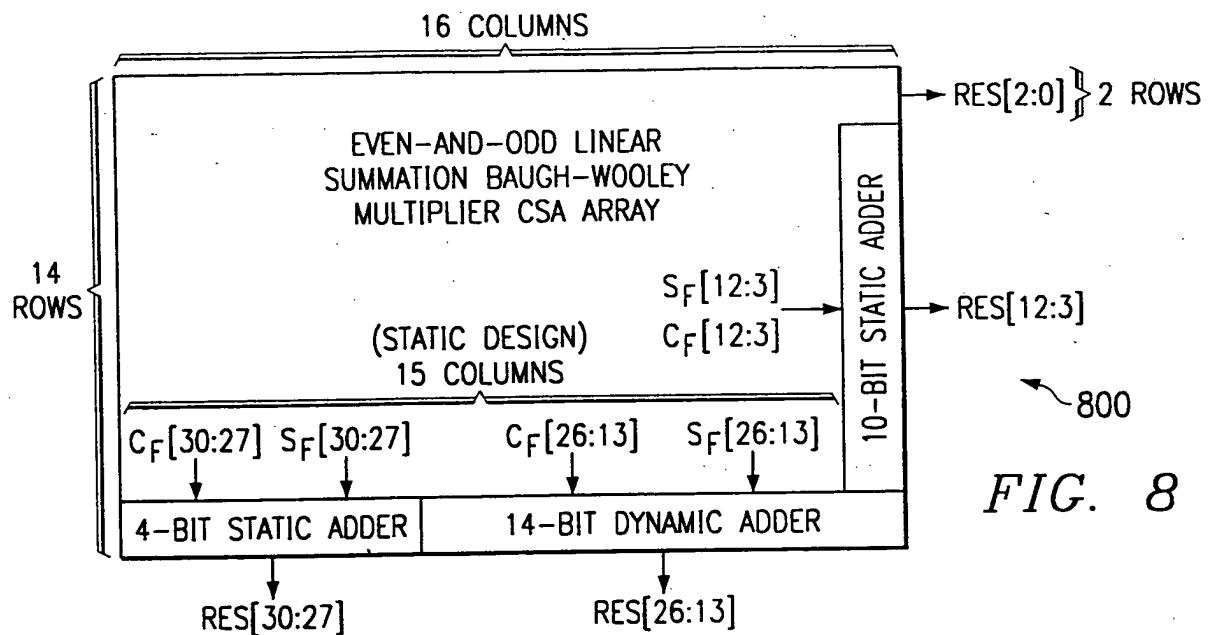


FIG. 8

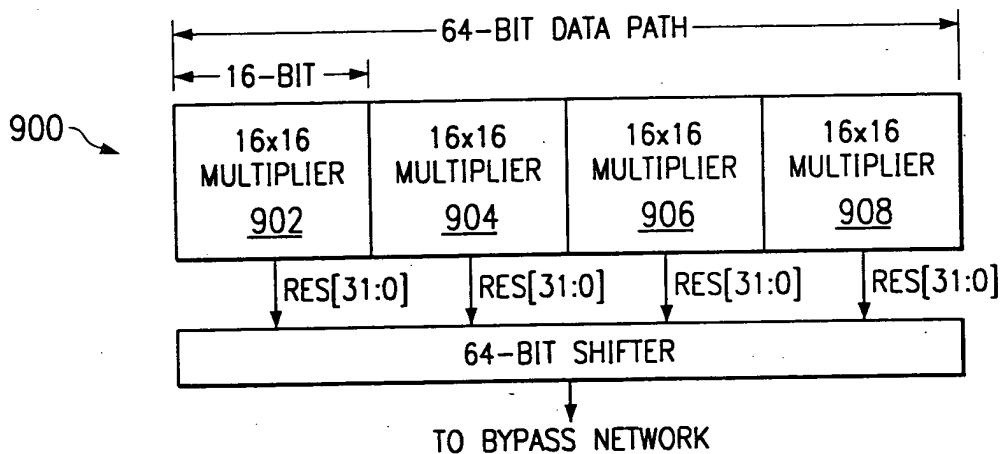


FIG. 9

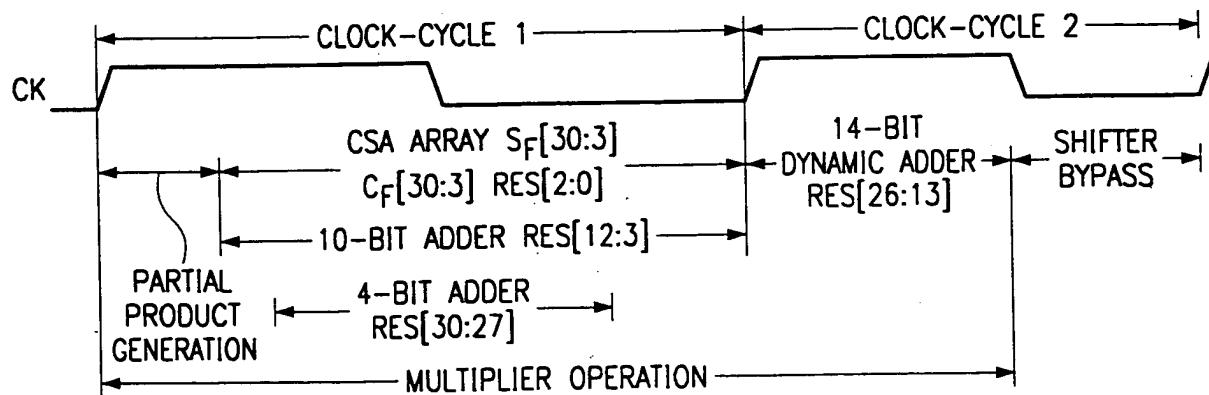
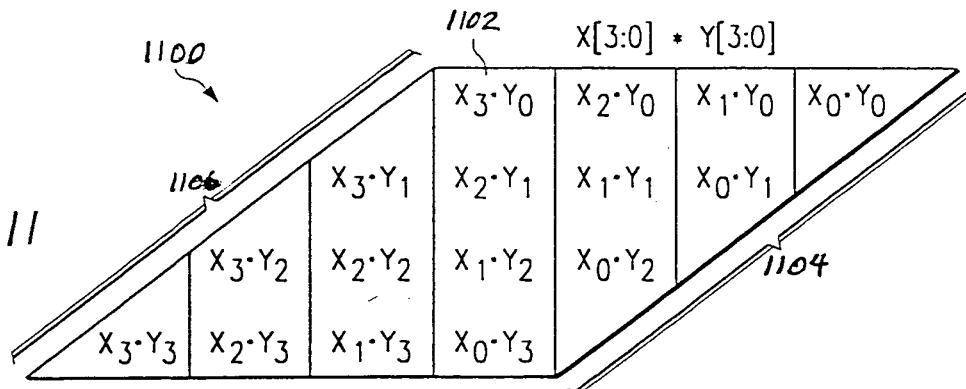


FIG. 10

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FIG. 11



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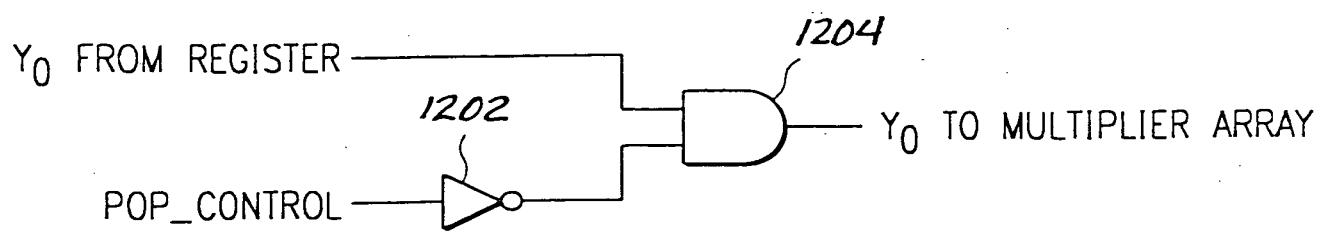


FIG. 12

LINEAR SUMMATION MULTIPLIER ARRAY  
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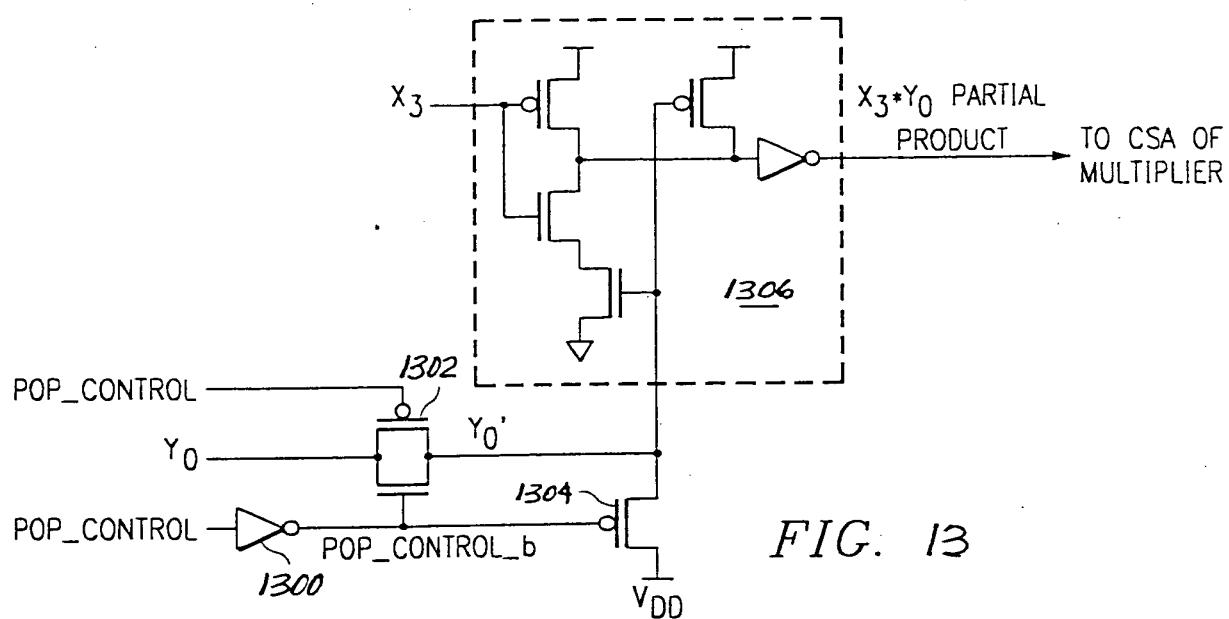


FIG. 13